LISTING OF THE CLAIMS

The listing of the claims provided below is intended to replace all prior versions of the claims. Please amend the claims as follows:

1. (Currently Amended) Droplet deposition apparatus comprising:

an array of fluid chambers, each chamber communicating with an orifice for droplet ejection, a common fluid inlet manifold and a common fluid outlet manifold; ~~and~~

~~means for generating~~ each chamber so connected with said inlet manifold and said outlet manifold as to enable a fluid flow ~~into~~ from said inlet manifold, ~~though~~ through each chamber ~~is~~ in said array and into said outlet manifold, said fluid flow through each chamber being sufficient to prevent foreign bodies in the fluid from lodging in the orifice; and

~~wherein~~ each chamber ~~is~~ being associated with means for effecting droplet ejection from said orifice simultaneously with said fluid flow through the chamber,

wherein the resistance to flow of said inlet and outlet manifolds is chosen such that ~~the~~ a negative static pressure at the orifice of any chamber in the array due to the flow varies between any two chambers by an amount less than that which would give rise to significant differences in droplet ejection properties between said two chambers in the array.

2. (Original) Apparatus according to Claim 1, wherein the inlet manifold has a resistance to flow less than that which would give rise to a variation in static pressure between the inlets to any two chambers in the array sufficient to produce significant differences in droplet ejection properties between said two chambers in the array.

3. (Original) Apparatus according to Claim 1, wherein the resistance to flow of said outlet manifold is chosen such that the pressure at a fluid inlet to any chamber in the array varies between any two chambers by an amount less than that which would give rise to significant differences in droplet ejection properties between said two chambers in the array.

4. (Currently Amended) Droplet deposition apparatus comprising:

an array of fluid chambers, each chamber communicating with an orifice for droplet ejection, a common fluid inlet manifold and a common fluid outlet manifold; and

~~means for generating~~ each chamber so connected with said inlet manifold and said outlet manifold as to enable a fluid flow ~~into~~ from the inlet manifold, ~~though~~ through each chamber in said array and into said outlet manifold, said fluid flow through each chamber being simultaneous with droplet ejection from said orifice and being sufficient to prevent foreign bodies in the fluid from lodging in the orifice;

~~wherein each chamber is associated with means for effecting droplet ejection from said orifice simultaneously with said fluid flow through the chamber,~~ the resistance to flow of one of said inlet and outlet manifolds being chosen such that the pressure at a fluid inlet to any chamber in the array varies between any two chambers by an amount less than that which would give rise to significant differences in droplet ejection properties between said two chambers in the array.

5. (Previously Presented) Apparatus according to Claim 4, wherein the cross-sectional area of at least one of the inlet and outlet manifolds is such that said pressure varies between any two chambers by an amount less than that which would give rise to significant differences in droplet ejection properties between said two chambers in the array.

6. (Previously Presented) Apparatus according to Claim 4, wherein the array of chambers is linear.

7. (Previously Presented) Apparatus according to Claim 4, wherein said array is angled to the horizontal and said inlet manifold extends parallel to the array, the properties of said inlet manifold varying in a direction lying parallel to the array in such a way as to substantially match the rate of pressure loss along the inlet manifold due to viscous losses in the inlet manifold to the rate of increase of static pressure along the inlet manifold due to gravity.

8-34. (Canceled)

35. (Previously Presented) Apparatus according to Claim 1, wherein the cross-sectional area of at least one of the inlet and outlet manifolds is such that said pressure varies between any two chambers by an amount less than that which would give rise to significant differences in droplet ejection properties between said two chambers in the array.

36. (Previously Presented) Apparatus according to Claim 1, wherein the array of chambers is linear.

37. (Previously Presented) Apparatus according to Claim 1, wherein said array is angled to the horizontal and said inlet manifold extends parallel to the array, the properties of said inlet manifold varying in a direction lying parallel to the array in such a way as to substantially match the rate of pressure loss along the inlet manifold due to viscous losses in the inlet manifold to the rate of increase of static pressure along the inlet manifold due to gravity.

38-64. (Canceled)

65. (New) A method of droplet deposition utilizing apparatus comprising an array of fluid chambers, each chamber communicating with an orifice to define a fluid meniscus in the orifice for droplet ejection, a common fluid inlet manifold and a common fluid outlet manifold, each chamber being associated with means for effecting droplet ejection from said orifice, the method comprising the step of generating a fluid flow into said inlet manifold, through each chamber in said array and into said outlet manifold whereby;

the fluid flow into each chamber is sufficiently greater than the maximum fluid flow of droplets deposited through the orifice that any foreign body in the fluid in the chamber which would inhibit droplet ejection if it entered the orifice, is by virtue of the flow through the chamber more likely to flow past the orifice than to enter into it;

a negative static pressure is maintained at each orifice when droplet ejection is not being effected; and

the resistance to fluid flow in the inlet and outlet manifolds is sufficiently small that the position of the meniscus in each orifice when droplet ejection is not being effected does not differ across the array.

66. (New) A method according to claim 65, wherein the flow into each chamber is sufficiently greater than the maximum fluid flow of droplets deposited through the orifice of the chamber that the fluid flow rate through each chamber remains substantially constant.

67. (New) A method according to claim 65, wherein the flow into each chamber is ten times greater than the maximum fluid flow of droplets deposited through the orifice of the chamber.